BILINGUAL EDUCATION, ACCULTURATION, AND THE PSYCHOLOGICAL HEALTH OF MEXICAN-HERITAGE PREADOLESCENTS

A Dissertation

by

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ABSTRACT

As the population of the U.S. becomes increasingly diverse, and greater numbers of children in U.S. public schools speak a language other than English at home, an intensified interest has begun to focus upon the lives of these children and the environments in which they learn and grow. Mexican heritage students are of particular interest as they comprise a steadily increasing proportion of all students. The present study is cross-sectional, exploratory and non-experimental in nature, and involved groups of fifth grade students in Texas, most of whom were of Mexican heritage. Following consent- and assent-gaining procedures, students from bilingual and non-bilingual classrooms were asked to complete measures examining their psychological health and acculturation status. Results from multiple analyses did not reveal a statistically significant relationship between the type of language environment in which they were instructed, their acculturation class membership and their overall level of psychological well-being. Implications and directions for future research are discussed.

This work is dedicated with love to my mother– who always encouraged me to seek out my own answers– and in loving memory of my father and Nana

Om Amriteshwaryai Namaha

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CHAPTER I

INTRODUCTION*

The population of students in the U.S. is becoming increasingly diverse; this poses unique challenges to scholars and educators. In the 2011-12 school year, approximately 4.4 million children and adolescents in the U.S. spoke a language other than English at home (U.S. Department of Education, 2014). Amongst the entire U.S. population over five years of age, 13% speak Spanish at home. A majority (53.1%) of the foreign born population in the U.S. comes from countries in Latin America and approximately one third of all foreign-born residents were born in Mexico. (U.S. Census Bureau, 2011a). In 2011, 23.7% of all U.S. students and over half (50.8%) of all school-age children in Texas were of Hispanic origin (U.S. Department of Education, 2014). Although some individuals prefer the term "Latino", official data from national and local organizations refers to this group as Hispanic. As such, the term Hispanic will be used throughout this study.

According to the U.S. Census Bureau (2011b), Texas has recently become a "majority-minority" state. This means that in terms of raw numbers, a majority of the population is a member of an ethnic minority group, although the cultural prestige afforded to white, non-Hispanics in Texas still affords them a "majority" status. In Texas, nearly one in three (29.4%) people over age five speak Spanish as a

*Figure 1 reprinted with permission from "Social-emotional needs of Latino immigrant adolescents: A sociocultural model for development and implementation of culturally specific interventions" by Blanco-Vega, Castro-Olivo, & Merrell, 2008. *Journal of Latinos & Education*, *7*(1), 43-61. Copyright 2008 by Taylor & Francis, LLC (http://www.tandfonline.com)

home language (U.S. Census Bureau, 2014). English Language Learners (ELLs) who participate in specialized language programs in school constitute 9% of all public school students in this country and an even higher percentage in Texas. During the 2011-12 school year, 14.9% of Texas' students were enrolled in bilingual or English as a Second Language (ESL) programs in school (U.S. Department of Education, 2014). Obviously, not all Hispanic students are first or second generation immigrants who are exposed to and/or speak Spanish at home. Students who are culturally and linguistically diverse (CLD) do, however, often experience differences between their home culture and the cultural norms and values promoted in the society at large. These experiences of difference are a part of acculturation and acculturation stress.

Acculturation and Acculturation Stress

The process of reconciling differences between the home culture and the dominant culture can result in internal and external conflict as children and adolescents develop an ethnic identity and a sense of belonging in society that may differ from their parents. As originally defined by Redfield, Linton, and Herskovits (1936), the process of adaptation that results when individuals from different cultures come into first-hand, continuous contact is called acculturation (as cited in Berry, 1997). When this process results in changes to an individual's psychological health, it is called psychological acculturation (Berry, 1997).

Public schools constitute the primary social context in which immigrant and minority students learn the norms and values promoted in the U.S. in conjunction with learning English literacy and academic skills (Suárez-Orozco & Suárez-Orozco, 2001). More attention has been paid in recent years to the academic trajectories experienced by

Hispanics within U.S. public schools, as they are often characterized by lower scores on standardized achievement tests of math and reading, and higher rates of drop out from school (National Center for Education Statistics, 1995, 2011). In the realm of Special Education, Hispanics are overrepresented in eligibility categories of specific learning disabilities and mild intellectual disability (Baca & Cervantes, 2004). In Texas in 2009, Hispanics dropped out at a rate three times higher than white students (Center for Public Policy Priorities, 2010). A history of failure within the Texas educational system may contribute to this phenomenon. In 2012, Hispanic children passed the State of Texas Assessment of Academic Readiness (STAAR) 5th grade Reading test at a much lower rate than white, non-Hispanics (72% versus 87%; Texas Education Agency, 2012). Notably, children who took the 5th grade STAAR Reading test in Spanish and were enrolled in bilingual programs had a higher passing rate (69%) than students enrolled in ESL programs who took the test in Spanish (57%). In 2014, the gap between passing rates of Hispanic students and white, non-Hispanic students had grown somewhat larger; 88% of white 5th grade students met satisfactory standards versus 71% of Hispanics (Texas Education Agency, 2014).

The Immigrant Paradox

Patterns of academic failure and higher drop out rates are not common to all generations of Hispanics. An interesting pattern in epidemiological research has emerged that researchers have called the "immigrant paradox" or the "Latino paradox" (Hernandez, Denton, Macartney, & Blanchard, 2012). Studies of children who are first generation immigrants, across multiple samples from the U.S., have consistently shown that they have levels of health, educational and behavioral functioning similar to non-

immigrant, white, English speaking peers (Coll & Marks, 2012). Inconsistencies in outcomes across these domains are seen in second generation children of immigrants and what is termed "generation 1.5" (Roberge, 2009), children who immigrate with their parents at young ages (before kindergarten entry). By the third and subsequent generations, children from immigrant-origin families consistently demonstrate poorer health, as well as poorer academic and social outcomes than children in the country at large. Researchers have asserted that these diminished outcomes are due in part to the process of acculturation and acculturation stress (Pumariega, Rothe, & Pumariega, 2005).

Culture and Mental Health

Historically, Hispanics tend to be underrepresented in the Special Education eligibility category of Serious Emotional Disturbance (SED; Baca & Cervantes, 2004). However, this phenomenon belies culturally relevant factors that may affect these students' mental health. Acculturation stress is produced by language barriers, exposure to racism and discrimination and loss of cultural values, and is considered to have a "tremendous" effect on the psychological health of immigrants (Blanco-Vega, Castro-Olivo, & Merrell, 2008, p. 54). Furthermore, Hispanic children may show early signs and symptoms of psychological distress that may be expressed in non-normative ways, or symptoms may be elevated but not considered to be of clinical significance (Anderson & Mayes, 2010).

Previous studies have examined the relationship between ethnic identity and risky outcomes in adolescence (Love, Zenong, Codina, & Zapata, 2006). Such studies have found that those students who have a higher degree of bicultural affiliation, when

controlling for other factors, tend to be at less risk for poor social outcomes (such as such as early pregnancy, involvement in gangs, drug and alcohol use) and are more likely to graduate from high school. Bicultural affiliation, also referred to as biculturalism (Buriel, 2012), acknowledges the process of adapting to one's new cultural surroundings while preserving a link with the culture of origin, by for example, engaging in family discussions about traditional practices, eating food and maintaining the celebrations that are common to the country of origin.

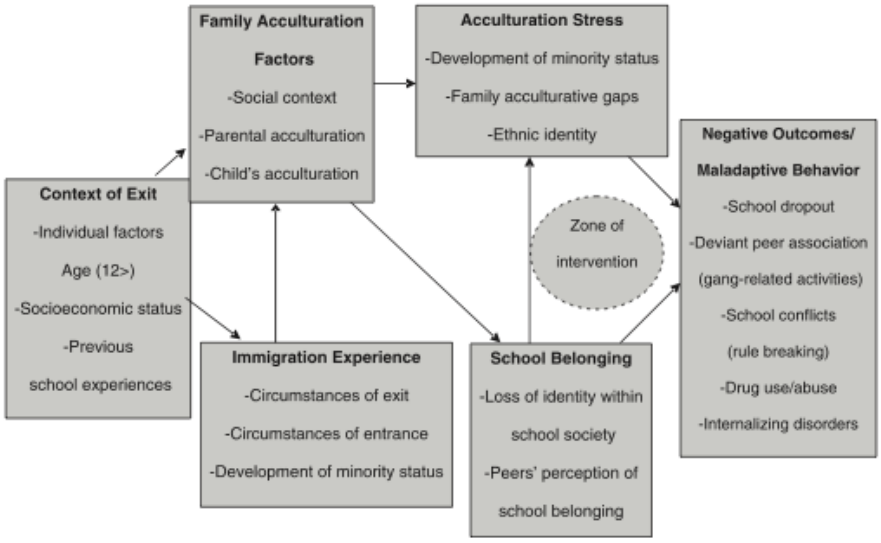
A Sociocultural Model for Explaining the Socioemotional Needs of Hispanic Immigrant Adolescents

Blanco-Vega et al. (2008) proposed a sociocultural model for explaining the socio-emotional needs of Hispanic immigrant adolescents (they use the term "Latino") that describes a complex interplay of personal, situational, school, family and community factors. A portion of this model (see Figure 1) was adapted and used as a framework for the current study, and was tested as it applies to Hispanic students about to enter adolescence, and who are first generation immigrants from Mexico or are descended from Mexican immigrants. These authors explained their model as a developmental and ecological framework. It is developmental in that it takes into account the factors from before migration (such as the context of exit from the previous country), to the migration process itself and the trauma that may result, and to the new social context of the host country. It is ecological as it considers intrapersonal, familial, school and societal factors, and how these may lead to more or less adaptive outcomes.

Blanco-Vega et al. (2008) described the multi-systemic protective factors that are often available to immigrant adolescents, which may help buffer them against the risks

they face as they encounter the new culture and language of their host country. Among these are parental involvement, positive school/community involvement and positive self-concept. They posit that Hispanic immigrant youth "need the support of their host culture in order to maintain and enhance the protective factors they arrive with" (Blanco-Vega et al., 2008, p. 58). They suggested that schools are particularly opportune environments to serve as the zone of intervention. Bilingual classrooms constitute social contexts that may serve as a protective environments for immigrant students, children of immigrants, and perhaps even for third and subsequent generations.

Figure 1
Sociocultural Model for Explaining the Socioemotional Needs of Latino Immigrant Adolescents (Blanco-Vega, Castro-Olivo, & Merrell, 2008)



Bilingual Education

Bilingual education has been identified as a way to promote positive academic outcomes for CLD students in a number of countries, including for Hispanics in the U.S. Children who attain academic proficiency in their home language are likely to attain a higher level of literacy in English (Cummins, 1984). A bilingual classroom also may provide a number of protective factors that promote social competence and emotional resilience, especially for culturally diverse students. Bekerman, Habib, and Shhadi (2011) conducted interviews with children at a bilingual school in Israel where Jewish and Palestinian children learned together in an integrated environment. Despite the fact that the Palestinian children expressed an implicit acknowledgement of their status as "second-class citizens" in Israel (p. 402), these children were more articulate, by the authors' report, and self confident, by their own report, in their expression of nuanced aspects of their ethnic identities than Palestinian students who attended monolingual schools. The authors concluded that the school's focus on "status equality, mutuality and co-operative interdependence" (p. 401) may have accounted for these positive findings.

A number of benefits of bilingualism/biculturalism are thought to serve as protective factors for Hispanic bilingual students in the U.S., such as family cohesion and the ability to adapt one's responses to diverse social/ contextual factors (Rivera et al., 2008). CLD children who learn two languages are better able to communicate with a wide variety of persons, including members of their family and ethnic community as well as members of the society at large. This confers to them the flexibility to navigate social situations in each of the two cultures. Teachers who are sensitive to the home culture of their students are also likely to better build positive home-school partnerships

that increase the confidence of their students (Borba, 2009). Bilingual environments may also implicitly convey to students that the language and culture of their home are valued, by providing the students with learning opportunities in their home language and allowing them to integrate their unique experiences into daily learning.

Statement of the Problem

Immigrant optimism and advantageous assessments of the U.S. culture as compared to the country of origin (Kao & Tienda, 1995; Buriel, 2012) may account for part of the enhanced academic functioning of first generation immigrants, but this positive outlook does not appear to transfer across generations. The diminished outcomes of third and higher generation Hispanic immigrants have been extensively documented across longitudinal and wide scale studies, including the National Longitudinal Study of Adolescent Health (NLSAH; Crosnoe & Lopez-Gonzalez, 2005). Researchers have cautiously advanced hypotheses about the processes that occur between the first generation and later generations that put the latter at greater risk for school drop out and poorer social-emotional functioning.

Academic failure, scholastic disengagement, and perception of discrimination are some of the phenomena that are likely precursors to the decision to drop out of school for culturally diverse students. Although the greatest incidence of school drop out in Texas occurs in 9th grade and above (Texas Education Agency, 2007), the conditions that lead to the decision to drop out are likely present years before then. At the same time, few studies have specifically examined the social and emotional trajectories of CLD students before the onset of adolescence, when it may be too late to intervene.

As Hispanic immigrants comprise a greater part of the U.S. population in the 21st century, it is critical to determine the variables that can impact their lives positively, that can preserve the dreams that they hope to fulfill for their children and grandchildren. All of our futures, in some measure, depend on the success of theirs. If we are able to identify protective environments that promote adaptive outcomes, we can all benefit.

Purpose of the Study

The developmental trajectories of preadolescents who enter the schools with experiences including immigration and dual language learning are not completely understood. The purpose of the current study is to examine the extent to which bilingual educational settings serve as a protective environment for the mental health of 5th grade students from Mexican-heritage families. There are currently no documented studies that explore this idea. Mexican heritage families are of specific interest as nearly one third of all immigrants in the U.S. are from Mexico (U.S. Census Bureau, 2012). Fifth grade is of particular interest, because it is often the final grade in which students may be taught in bilingual learning environments, if available. Thus, the possibility exists for examining the psychological health of students who have received education in English as well as their home language.

The extant literature on variables that affect Hispanic students' outcomes is filled with methodological shortcomings, such as failure to document generational status, age at immigration, lack of consideration for the parents' and teachers' acculturation processes, and failure to examine within ethnic group differences (Rogler, Cortes, & Malgady, 1991). Most often, the existing research considers Hispanics only in reference to a white, monolingual norm group. The current study will attempt to overcome many

of these limitations and to address multiple factors that may be related to the outcomes for Hispanic students with consideration for the effects of biculturalism and bilingual learning experiences. Characteristics of students who are in bilingual Spanish/ English learning settings will be compared to those of other Mexican heritage children who do not receive formal instruction in Spanish.

Research Hypotheses

1. Mexican-heritage ELL students who experience bilingual education for one or more years will be more likely to express a bicultural type, as measured by acculturation class, than Mexican-heritage students who are not in a bilingual education classroom.
2. Controlling for generational status, Mexican-heritage students who experience bilingual education for one or more years will demonstrate better psychological health, as measured by a lower Total Difficulties score on the SDQ, when compared to Mexican-heritage students or English monolingual and have been primarily instructed in English speaking classrooms.
3. Controlling for percentage of Hispanic children in the school, expressing a bicultural type, as measured by response to a multi-dimensional acculturation questionnaire, will predict better psychological health, as measured by a lower Total Difficulties score on the SDQ (using a clinically derived cut-score).
4. Controlling for percentage of Hispanic children in the school and generation status, lower acculturation stress, as measured by a score on the item relating to acculturation stress on the acculturation questionnaire, will predict better mental

health, as measured by a lower Total Difficulties score on the SDQ (using a clinically derived cut-score).

CHAPTER II

LITERATURE REVIEW

Immigration and the Immigrant Paradox

Most Americans can trace their family lineage back to one or more immigrants who came to the U.S., perhaps in search of fortune, adventure, opportunity, or fleeing religious persecution or political unrest. Some of our ancestors were brought to America unwillingly, forced into bondage and hard labor. America is the country we know today because of the efforts of these voluntary and involuntary immigrants (Berry, 1997). In spite of the fact that, as John F. Kennedy said, we are a "nation of immigrants" (1964), attitudes toward new immigrants have often been characterized by hostility and rejection, prejudice and subjugation (Suárez-Orozco & Suárez-Orozco, 2011). This inhospitable welcome has done little, historically and presently, to curb the tides of voluntary immigrants who have come to America seeking a new life.

Most often, the first generation immigrant maintains some ties to the country of origin; however, native language, values and views from the home country (elements of what Suárez-Orozco & Suárez-Orozco called "expressive culture") are often not fully transmitted to the second generation, and over successive generations, may fade. Third, fourth and subsequent generations often drop the cultural descriptor before "American" preferring to just be an unhyphenated American. This characterizes what Berry (1997) called an "assimilation strategy" (p. 9), shedding and potentially rejecting the old ways of life, in favor of becoming fully part of the new culture. This strategy is at one extreme of acculturation styles of adaptation. More acculturation strategies will be discussed

later. For the purposes of the present research, the terms acculturation type, class or affiliation are preferred over acculturation strategy. The word 'strategy' implies purposeful intent, and as children are often not in control of the choices related to their immigration, the term 'strategy' is not deemed appropriate.

Parents who bring their children to a new land do so with one or several motives in mind. Sometimes job prospects have become scarce in the country of origin. At other times, family reunification is the primary motivation. Some parents are running away from persecution or toward educational opportunity. Adult immigrants, of all types, are often full of optimism (Kao & Tienda, 1995) when they come to a new country. This positive outlook serves as a protective buffer against the numerous risks they may face. The new land, despite its promise of opportunity, is often not as hospitable as previously thought. Racism, xenophobia, and fear can be communicated overtly and in the form of exclusion, segregation and discrimination. The journey, especially as experienced by undocumented immigrants entering the country illegally, may be brutal and even life threatening. These risks are often tolerated, because they are considered more likely to result in a better future than the future they saw in country that they left behind. This dual frame of reference characterizes the perspective of many first generation immigrants (Suárez-Orozco & Suárez-Orozco, 2010).

The children of immigrants, depending upon the age at which they immigrated, might not identify with their parents' point of view regarding the motives for immigration. When they arrive as older children or adolescents, they may share some of the perspective of their parents, and may have faced the same treacherous passage that their elders did. Some children make the journey across borders alone, are greeted by

family they may have never met, and experience long separations from their parents. Under such circumstances, the stress related to separation might overcome the hope for a new life, from the child's perspective.

Many immigrant families, by necessity, live in crowded urban settings, in poorer neighborhoods, where risks that are associated with poverty, such as low-performing schools (Kao & Tienda, 1995) are found. Despite the potential hardships they face, first generation immigrants, across a number of indices, fare better than their children or grandchildren. Longitudinal and cross-cultural studies have provided evidence for the immigrant paradox in terms of health, behavioral and social risk (Urquia, O'Campo, & Heaman, 2012; Van Geel & Vedder, 2010).

If one attends to the bulk of the data collected about the immigrant paradox, it would appear that beginning with the second or third generation, well-being "deteriorates" (Hernandez et al., 2012, p .24). However, not all immigrant groups experience this to the same degree. Studies of the immigrant paradox using Mexican and Mexican-American subjects have yielded differing results from studies of Puerto Rican, Cuban or other Latin American groups, underscoring the need for ethnic specificity in understanding these complex phenomenon (Teruya & Bazargan-Hejazi, 2013).

While the immigrant paradox has been documented in studies of immigrants from various homelands in various host countries, most studies report findings of data yielded using adolescent and adult samples. What is less understood are the developmental trajectories beginning in childhood. Further, there is emerging evidence that childhood patterns may not look the same as later outcomes (Crosnoe, 2012).

Data from the Early Childhood Longitudinal Study- Kindergarten Cohort, a nationally representative study of children in the U.S. beginning at school entry, shows some curious trends about the behaviors of first and subsequent generations of students (Turney & Kao, 2012). Based upon teacher ratings of externalizing behaviors, Mexican origin children (1st and 2nd generation) displayed fewer of these behaviors in 5th grade than their white, third plus generation counterparts. Between kindergarten and 5th grade, while externalizing behaviors rose across most groups, they actually declined in the 1st generation Mexican immigrant cohort. Similarly, based upon teacher rating of child social competence and work habits, Mexican heritage children closely resembled the white, non-immigrant cohort by the end of 5th grade. Curiously, evidence of an immigrant disadvantage arose when looking at Hispanic parents' ratings of their children's social competence (within-ethnic group, national origin distinctions were not made in these analyses). First generation children actually displayed significantly poorer social behaviors, from their parents' perspective, when compared to their U.S. born Hispanic counterparts. Another interesting result of the parent reported ratings was that, between kindergarten and 5th grade, parents considered that their child's health status declined considerably amongst the Mexican heritage groups (1st and 2nd generation), a trend that was not seen to such a degree in other subgroups. The absence of student-reported data in reported results of these findings constitutes a major limitation. Additionally, these authors fail to speculate about potential causes of the parents' views of their children's health as declining, beyond saying that it could be attributable to measurement error. It is worth considering that their children, while not displaying

conduct problems, may be expressing internalizing problems through somatic symptomology.

Differing results based upon measured outcome, developmental status, age of the child, generational status, country of origin and rater (parent or teacher) illuminate the considerable complexity involved in analyzing immigrant trends and inferring meaning from them. Adolescents and adults display much more marked trends in terms of social, psychological and behavioral outcomes. It is increasingly apparent that generalizations made about Hispanics as a group are devoid of useful meaning, and that attention must be paid to the potential confounding variables that are present in samples of Hispanic, immigrant-origin families. Though difficult, it is also critical that researchers examine the precursors to the social, behavioral, academic and health outcomes of Hispanic adults and adolescents. Taking careful account of all factors that may affect immigrant children will assist with formulating meaningful interventions before the onset of the problems that emerge later in life.

Measurement Issues Impact the Perception of a Problem

Although the ethnic demographics of the U.S. have undergone a major shift within the past few decades, a corresponding shift in the techniques of research employed with minority groups has been slower to progress. Knight, Roosa and Umaña-Taylor (2009) described methodological issues that facilitate scientific study of specific ethnic groups. They provided support for the use of within-group research designs to facilitate understanding of variables that are unique to subsets of the general population, and encouraged researchers to be mindful of the diversity that often exists even within narrowly defined groups.

Assessment tools used to compare the multiple spheres of functioning of Hispanics and white, non-Hispanic groups often suffer shortcomings that may affect the validity and generalizability of findings. Many questionnaires or survey instruments are merely translated from English, and not always using the proper techniques for doing so (D'Alonzo, 2011). Also, measures are often not normed on a Hispanic sample. Even when this is accomplished, the variability caused by within group differences may make such tools limited in their utility to yield useful data for specific subgroups from various national origins (Umaña-Taylor & Fine, 2001).

Mayfield and Reynolds (1998) set out to test the hypothesis that using an ethnicity specific test would lead to better performance by the ethnic subgroup participants relative to the cultural majority. They did this by developing ethnicity-specific forms of the Behavior Assessment System for Children Parent Rating Scale, Adolescent form (BASC-PRS-A). The hypothesis that ethnic group members would perform in the direction of less pathology than white majority members on the test that was developed using the ethnic group sample was not upheld. The authors determined that "ethnic differences on psychological tests are certainly far from being explained and understood" (Mayfield & Reynolds, 1998, p. 332). These authors suggested that differential item pools written by members of ethnic minorities might serve to reconcile some of these issues. Indeed, it is intuitively appealing as well as logical that simply changing the ethnic composition of the norm group will not change the subgroup performance on a test, if the test consists of a set of items that may be biased, or at least fails to include items that represent more relevant themes for that subgroup.

Measurement issues may be at the heart of the difficulties in detecting certain problem areas for Hispanic youth, including culturally specific expressions of internalizing disorders (Anderson & Mayes, 2010). Developing culturally sensitive psychological tests for Hispanics should become a priority for test developers, though perhaps due to the previously stated underrepresentation of Hispanics under the Special Education eligibility of emotional disturbance, the problem of underrepresentation does not seem as urgent perhaps as overrepresentation. However, some studies have suggested that Hispanic youth do, in fact, exhibit emotional problems at a higher rate than is generally acknowledged (Brown, Meadows, & Elder, 2007; as cited in Anderson & Mayes, 2010).

The selection of the SDQ for the current study as an indicator of the outcome variable of well-being was purposeful. This measure has been used in studies of adolescent immigrant/refugee populations (Rousseau et al., 2014) and has been validated for use with samples from various cultural and linguistic backgrounds (Goodman, Ford, Simmons, Gatward, & Meltzer, 2000; Goodman, Renfrew, Mullick, 2000).

Internalizing Disorders in Hispanic Youth and Families

Studies involving adult immigrants to the U.S. from Mexico have found an increased prevalence of symptoms associated with internalizing disorders as length of stay in the U.S. increases. Some estimates of clinically significant symptoms amongst immigrant adults based upon these studies reveal a much higher incidence that that found amongst the general U.S. population. One study of Hispanic immigrant adults found that 40% experienced internalizing symptoms that merit clinical attention (Hiott, Grzywacz, Arcury & Quandt, 2006). Children of these adults presumably are impacted

by their parents' levels of depression and anxiety and may similarly experience increased rates of disorder. However, data from CLD youth samples paint a mixed picture of the incidence of mental health difficulties.

Anderson and Mayes (2010) conducted a review of literature regarding the prevalence of internalizing disorders in youth from various ethnic backgrounds in the U.S. and presented evidence from studies that both supported and refuted the higher incidence of depression and anxiety in Hispanic youth compared to other subgroups. In their review, they cited several studies in which Hispanic students were at a significantly higher risk of developing depression, up to two times higher than white, non-Hispanics in a random sample of Californian adolescents (Mikolajczyk, Bredehorst, Khelaifat, Maier & Maxwell, 2007, as cited in Anderson & Mayes, 2010).

Depressive symptoms do not always translate into clinically significant impairment, however. One cited study found a lower rate of depression and dysthymia amongst Hispanic youth when compared to white youth (Nguyen, Huang, Arganza, & Liao, 2007). This study used chart reviews in lieu of self-ratings, however, which introduces the subjective nature of the clinicians' judgment.

Anxiety symptoms are found at a higher rate amongst Hispanic adolescents than their white peers as suggested by numerous studies that included self-report measures. On the Penn State Worry Questionnaire for Children (PSWQ-C; Chorpita, Tracey, Brown, Collica, & Barlow, 1997), Hispanic youth reported higher rates of worry than white students. Anderson and Mayes (2010) also cited studies that examined variability of symptom expression between ethnic groups. They cited Choi and Park (2006) who found that expression of depressive symptoms in a middle school sample of urban

Hispanic youth included "diminished pleasure, decreased energy, low self-esteem, crying, and difficulties in concentration" (Anderson & Mayes, 2010, p. 341) whereas other ethnic groups in the sample expressed depression as aggression, anger, sadness or irritability.

Differential rates of internalizing disorders were also present for Hispanic boys versus girls. Girls tended to exhibit higher levels of depression, which may be caused in part by the conflict between gender role expectations in the U.S. and the home country (Umaña-Taylor & Updegraff, 2007, as cited in Anderson & Mayes, 2010). Hispanic boys, these authors asserted, may feel the pressure to adhere to the cultural norm of machismo, or overt masculine expression, which could lead to a suppression of emotional symptoms. These authors, while presenting a comprehensive review of recent studies, did not however discuss the differences between Hispanic youth of various generations. Interest in the lives of families impacted by stressors associated with immigration has resulted in recent research examining the well-being of the individuals in these families.

Lahaie, Hayes, Piper and Heymann (2009) conducted research with families in Mexico who had experienced extended periods of separation from at least one primary caregiver due to immigration. Their results suggest that the children in these families had greater incidence of emotional, academic and behavioral difficulties than similar intact families. Although this study did not seek input about the children who had migrated with their families to the U.S., it is likely that those children may face some similar and some unique challenges due to the hardships imposed by immigration.

Some recent studies have examined the importance of school as a social context to the mental health of immigrant adolescents. These studies suggest that when the ethnic background of the immigrant student is more highly represented in the ethnic composition of the school that they attend, fewer adverse emotional and behavioral outcomes result.

Georgiades, Boyle and Fife (2013) examined the relationship between ethnic an immigrant generational congruity in schools and levels of emotional and behavioral problems in a stratified random sample of American high school students who participated in the National Longitudinal Study of Adolescent Health in 1994-95. These researchers found that "immigrant and racial/ethnic congruence in school exhibited a negative association with emotional and behavioral problems for most sub-groups" (p.1473). School belonging was found to partially account for these effects.

Another large scale study conducted by Closson, Darwich, Hymel, and Waterhouse (2014) in Canadian multiethnic high schools, found that perceived discrimination was lower amongst ethnic minority students who attended school in which there were greater numbers of same-ethnicity and immigrant peers. This effect was found to vary depending on the ethnic group.

It appears unclear from available research whether first generation immigrant youth in the U.S. are more or less likely to experience psychopathology than other CLD children. This is due in part to the lack of valid assessment tools, in part due to language barriers, and in part due to the fact that immigrants may be less likely than their U.S. born counterparts to seek social-emotional support from public institutions (Kataoka et al., 2009). Despite many barriers, first generation immigrant youth consistently express

favorable outcomes, such as lower involvement in risky behaviors during adolescence. Buffered by the optimism of their immigrant parents (Kao & Tienda, 1995), they are more likely to succeed in school and to express positive feelings about school (Bui, 2012). These markers of success are particularly remarkable in light of the harrowing experiences that some immigrants endure during migration. One study conducted by Cervantes, Padilla, Napper, and Goldbach (2013) found evidence for an acculturation paradox amongst first, second, and third generation Hispanic adolescents; even though the first generation youth they surveyed reported higher numbers of acculturation-related stressors, they also reported having fewer mental health problems.

Although most immigrants live in the U.S. legally (Suárez-Orozco & Suárez-Orozco, 2001) a number do arrive in the U.S. without the proper papers. The journey across the U.S. border made by undocumented immigrants can be perilous, especially for children. As a result, an unknown number of children who experience immigration also arrive with trauma that they do not and perhaps cannot articulate. The relationship between trauma and later risk of school drop out has been established, with conduct disorders and substance use mediating this relationship (Porche, Fortuna, Lin, & Alegria, 2011). The incidence of post-traumatic stress disorder (PTSD) may depend less upon generational status and more upon the context of exit from the home country and the level of violence in the neighborhoods where immigrant families settle (Kataoka et al., 2009).

Some have postulated that it is, ironically, attributable to their status as English learners that immigrant students have such positive outcomes across multiple domains. Lower English fluency is associated with lower levels of acculturation to the host

culture. High affiliation with American culture at the expense of the home culture may increase the risk of deviant behavior and poor outcomes (Coll & Marks, 2012). Other scholars assert that the immigrant student with low English fluency may not yet perceive ethnic slurs or the negative messages about their culture, which come from many directions, including, unfortunately, the public school classroom (Valenzuela, 1999). In light of the success and resilience of first generation immigrants, it is particularly tragic that their children and grandchildren experience diminished outcomes across the generations. School standardized test scores are merely one of the indicators that characterize this decline.

Hispanics in Texas: Academic Indicators of Risk

In the current high stakes educational environment, Hispanic and other CLD youth are compared, fairly or not, to white students. While nearly one in six Texas students is classified as an ELL (Texas Education Agency, 2010), only 10% of those students were given the state-mandated academic accountability test using linguistic accommodations. A Spanish language version of the STAAR test is available for students in grades 3-5, but the vast majority of students, even immigrants who have only studied English for one year, must take the test in English beginning in 6th grade. Students who took the previous version of the state accountability measure, the Texas Assessment of Knowledge and Skills (TAKS), in Spanish passed the test at a higher rate than Hispanics who took the Linguistically Accommodated Test (LAT) in English. Although the passing rates on the Spanish test diminished between the 3rd, 4th and 5th graders, who had 68%, 58% and 50% passing rates, respectively, this was still higher than the passing rates for the TAKS-LAT in English. Fewer than half of 3rd grade

Hispanic students passed this test (45%), while 25% and 30% of Hispanic 4th and 5th graders passed. In 6th grade, when all students had to take an English version of the TAKS, only 18% passed the LAT version (Texas Education Agency, 2012).

This data points to diminished academic success for students whose home language is no longer supported in school. Drop out rates in Texas are monitored beginning in the 7th grade, and although few children officially drop out in middle school, the stage is set in early adolescence for risky behaviors, academic disengagement and failure that may lead to later drop out. Drug and alcohol use as well as risky attitudes toward drugs and alcohol can begin in elementary school (Kulis, Marsiglia, & Nieri, 2009). Gang affiliations sometimes form before high school. There is some indication, however, that identifying with the home culture can serve as a protective factor, across developmental stages.

Updegraff, Umaña-Taylor, McHale, Wheeler, and Perez-Brena (2012) used a longitudinal design to compare developmental trajectories across adolescence for two groups of Mexican-heritage students, based upon national origin. One of the primary findings from their work was that students' own academic expectations fell across adolescence for students who were first generation immigrants born in Mexico, but not for their U.S. born counterparts.

Longitudinal research examining the academic outcomes of ELLs in Texas conducted between 1995 and 2007 indicates that students who exited an ELL program after three years had the most advantageous long-term academic outcomes as measured by state standardized test results, even as compared to non-ELLs. It was suggested that students who took longer than three years to exit may have been transnational or

migratory students whose pattern of school disruption led to poorer outcomes (Flores, Batalova & Fix, 2012).

Acculturation Styles: Risk and Protective Factors

Identity development is the primary developmental task of adolescence (Erickson, 1963). For some students, the examination of identity factors occurs in the halls of high school, where adolescents flexibly mold their identity according to their evolving interests and social alliances. However, for CLD students, identity development may happen much earlier than high school. According to Suárez-Orozco and Suárez-Orozco (2001), being from an ethnic or cultural group that is different from the mainstream forces immigrant children early on to evaluate their culturally instilled beliefs and values and to grapple with the issues related to their sense of belonging in two cultures. The process of acculturation adds to the already challenging process of identity development the additional weight of navigating successfully in two (or more) worlds, which may mean two languages, two sets of expectations regarding behavioral norms, and two value systems.

An immigrant child (or adult) may, depending upon myriad personal and contextual factors, opt for one of several styles of managing this complex task of adjustment. Berry (1997) described these as acculturation styles, occurring along two axes: one indicating the identification with the native or home culture and the other signifying the degree of contact and participation within the new cultural milieu. The person who chooses to remain in primary contact with the home culture, to an extent rejecting the new one is said to experience separation. The individual who, by contrast, rejects the culture of origin and embraces the new culture and language is said to have

chosen assimilation. The integration strategy (also termed biculturalism) occurs when a degree of connection with the home culture is maintained while aspects of the new culture are explored and infused into the person's life. Many authors have identified this as the most adaptive of these four styles (American Psychological Association, Presidential Task Force on Immigration, 2012). Finally, when a person does not relate to or embrace either culture, they are said to experience marginalization. This style is associated with greater risk, as the individual is essentially adrift without a sense of belonging or relatedness to others. Identities are shaped by the style of acculturation one adopts, and this can have profound effects for immigrants and other CLD children.

One study examined family orientation and anxiety symptoms amongst 133 Hispanic children in 5th to 7th grades. Martinez, Polo and Carter (2012) were interested in the degree to which family orientation values predicted various symptoms of anxiety. They found that family orientation was significantly associated with separation anxiety and harm avoidance, providing support for the use of including sociocultural variables in the study of mental health amongst Hispanic youth.

Love, Zenong, Codina, and Zapata (2006) sampled 1,892 Mexican American students in South Texas regarding involvement in risky health behaviors (from drug use to carrying weapons to school to eating and exercise habits). They found that the affiliation amongst Mexican-American youth with a traditional ethnic identity served as a protective factor for decreased involvement in drugs and alcohol. Furthermore, a stronger ethnic identity was more protective. This finding must be considered in a broader context than other research examining risk in Hispanic students. Demographically, the southern part of Texas is a region of the state where Mexican-

heritage families are not only a statistical majority, but also define the cultural landscape of this region. Therefore, these results may not generalize to other populations of Hispanics who are not the majority in their communities. Portes and Rumbaut (2001) hypothesized that immigrant children who live in traditional ethnic communities are provided with support for cultural maintenance and connection with the culture of origin. However, the phenomenon of bicultural affiliation serving as a protective factor is increasingly accepted by scholars and has been documented in cross-cultural studies.

In a large-scale investigation of immigrant children conducted in Norway (Oppedal, Røysamb, & Heyerdahl, 2005), study authors found that risk and protective factors related to acculturation level served as a mediator for self reported indices of psychiatric risk for immigrant students in Norway from a number of countries of origin, including Latin America. Using the strengths and difficulties questionnaire as a measure of psychological functioning, these authors operationalized risks in terms of ethnic identity crisis and perceived discrimination. Protective factors were measured by level of culture competence and collectivist family values.

One of the risks associated with acculturation is acculturation stress (Berry, 1997). Acculturation stress may stem from a number of factors that affect the immigrant child upon arrival to the U.S. Isolation, role confusion, and learning a new language are all stressors that impact the immigrant child during the normal course of adaptation to their new life. It comes as no surprise then that immigrant children are more likely than subsequent generations to experience acculturation stress (Kulis, Marsiglia, & Nieri, 2009). While acculturation stress is not, in itself, maladaptive, if the stress becomes overwhelming, it may become pathological (Berry, 1997).

Many factors may provide a protective influence for immigrant children. One of these is the degree of family cohesion they experience. Rivera et al. (2008) examined a large sample of Latinos in the U.S. and found that psychological distress was lower in families who were considered highly cohesive; however, this was expressed differently in various Hispanic subgroups. For Mexican families, family cultural conflict, even within cohesive families, was associated with higher psychological distress. This conflict may also be called an acculturation gap. This occurs when immigrant children and parents experience a collision of values, languages and expectations based upon their differing cultural contexts. The parents of immigrant children may have limited English abilities, may work long hours or have multiple jobs, and may feel the burdens associated with poverty, as well as experience their own acculturation stress (Hernandez, Denton, & Macartney, 2007). These may serve to widen the acculturation gap between parents and children. Children may therefore, as a result of not relating to their primary role models, go in search of other influences. They may adopt the cultural attitudes of peers, who may or may not be a positive influence. Teachers may also serve as role models for children, especially at elementary ages. School is one of the primary settings in which children seek to develop a sense of belonging through social relationships.

While much literature has focused on the cognitive and academic benefits of bilingual education, no research to date has explored the possible protective effects of the bilingual classroom for CLD children's psychological health. It is believed that these settings may assist the child in the development of an integrated, bicultural identity. This may result from a number of the features of bilingual settings; however, many remain unconvinced that bilingual education is a worthwhile investment in the future.

Bilingual Education in the U.S.

Bilingual education has become one of the most controversial educational topics of the 21st century. Three states have made it illegal, while proponents have stood behind the research base, which demonstrates numerous benefits of being bilingual. The controversies surrounding bilingual education generally have little to do with the academic impact of such programs. Rather, they are often emotionally charged political debates regarding national identity, with anti-bilingual education proponents advocating for the cultural and linguistic assimilation of immigrant children. A full treatment of these issues is beyond the scope of the present discussion; however, it is important to note that bilingual education programs in the U.S. are under attack. This social and political climate underscores the urgency of bringing to public attention the known benefits of bilingual education and of discovering new benefits.

Cummins (1984) is one of the most widely cited authors in bilingual education due to the widespread acceptance of his theories related to language development and proficiency. He has asserted, and cited evidence to support his claim, that achieving a high level of (academic) proficiency in the home language can positively impact the learning of a second language. This is due to what he terms Common Underlying Proficiency (CUP). Researchers who have examined the empirical evidence of Cummins' theories (Goldenberg, 2008) have reported that students who develop literacy in their home language are more adept at literacy development in the second language. This advantage has also been shown in older children at higher levels of education. Researchers have also examined the functioning of the bilingual brain and determined that there are some cognitive benefits to being bilingual. Bialystok (2009) reported that

bilingual children display enhanced executive functions (attention, inhibition and working memory) compared to monolinguals, likely due to the demands of switching between two languages.

In addition to uncovering the cognitive and academic benefits conferred by bilingual education, researchers – often using qualitative and ethnographic methods– have documented the important role that culturally sensitive teachers can play in the lives of immigrant students. Valenzuela (1999) depicted how teachers, by fostering caring relationships with their urban, immigrant and CLD students could positively impact the academic and emotional lives of these students by providing care and compassion for their unique stories and experiences. In doing so, they forged meaningful relationships that may serve to inoculate these students against certain risk factors that they face. Indeed, knowing an adult who him/herself has become a successful bilingual/bicultural individual can fill the gaps where such role models may appear scarce. Bilingual teachers, by virtue of speaking the home language of their students may also be able to forge and strengthen home-school partnerships. Even teachers who do not speak their students' home language, but who teach in culturally relevant ways can improve their students' engagement in learning and thereby their academic achievement (Suárez-Orozco & Suárez-Orozco, 2001).

It is acknowledged that bilingual teachers and bilingual programs are not all alike. It is also expected that the spectrum of quality teaching and quality programs will vary as much in bilingual classrooms as in monolingual classrooms. This level of quality may have as much to do with teacher related factors as it does with the type of bilingual program offered.

Some bilingual programs integrate the home language in early grades and gradually transition children each year toward a higher percentage of instructional time in English. Some teach specific academic subjects in one language and other subjects in the second. Some provide dual language instruction in all subjects throughout the bilingual program. Two-way dual language programs incorporate fluent English speakers who wish to learn a second language fluently into the classroom. This is often considered the most beneficial model of bilingual education, as it reduces the impact of cultural isolation that ELLs in one-way bilingual classes may experience (American Psychological Association, Presidential Task Force on Immigration, 2012).

Models of bilingual education are as varied as the districts and classrooms they are taught in, however, the common element they share is the integration of the students' home language into the classroom environment. In the current study, the type of bilingual programs instituted in the various districts in the sample were of the same type: early exit transitional. This means that students were provided instruction in the early grades in English and Spanish. As students advance through the middle elementary grades, a gradual transition occurs, so that by the end of elementary, a majority or perhaps all of instruction occurs in English, with native language support offered as is available. Sometimes, a team of two teachers share teaching responsibilities for two classrooms of students; one teacher provides part of the daily instruction in Spanish while another teaches in English.

It is hoped that this study will contribute in a small way to the psychological and educational literature by broadening the discourse to include the impact that certain

academic environments may have on the psychological health of Mexican-heritage, immigrant and other CLD students.

CHAPTER III

METHODOLOGY

This quantitative research study is exploratory and non-experimental in nature. Questionnaires were given to intact groups of respondents. A cross-sectional sample of 5th graders was used from multiple classrooms in Texas schools over multiple years. The parents and teachers of the students were also asked to provide responses, and educational records were accessed for students whose parents specifically consented to this.

Participants

Participants were recruited from selected Texas school districts. The selection of a school district was based on the population demographics for the school district. These included districts with a large proportion of Hispanic students living in the area. The aim was to recruit a sample with a similar ethnic demographic makeup to the state at large. Districts in urban, suburban and rural areas, and with higher or lower proportions of Hispanics were invited to participate, in order to increase generalizability of findings. All districts offered bilingual or ESL programs, as this was a criterion for inclusion. The children had to be enrolled in their district for the previous calendar year in order to adequately control for the amount of exposure to the classroom setting. Students who received Special Education support were not excluded from the sample, and they did not constitute a large portion of students sampled.

At the beginning of the data collection period, it was anticipated that three distinct groups of Mexican heritage students would exist in the schools: a) students in

bilingual education classes, b) students who were not in bilingual education classes, but were provided ESL services, and c) students who were not provided support for English language acquisition. Although actively sought, children who had not experienced bilingual programming, but had received ESL services did not emerge as a distinct group amongst those sampled. Based upon an a priori power analysis using G*Power 3.1 (Faul, Erdfelder, Buchner & Lang, 2007, 2009) with three groups, it was determined that a total of 48 students would be needed for sufficient power to substantiate any significant findings for a one-way ANOVA with 3 groups using power (1-β) of .95 and an effect size of f = .6. With two groups using the same parameters, 40 students would be needed according to G*Power 3.1. Ultimately, two groups of Mexican heritage students emerged: those who were in bilingual education classes, and those who were not and did not receive language services directed at ELLs. Because all students in each participating class were invited to take the consent and permission forms home, regardless of their ethnic heritage, a group of students who were not of Mexican heritage constituted a third group of respondents. Those students who had proper consent signed completed all measures, although their responses were not included in three of the planned analyses in this study unless the students were from Mexico, or came from a home with at least one parent of Mexican origin, or identified as Mexican or Mexican-American. Students who were not of Mexican heritage were used as a reference group for research question two.

A total of 62 student permission forms were received from three school districts. Of these, 55 students assented to participate. Of the 55 students who completed questionnaires, 52 of their parents gave further consent for the researcher to access the

educational records kept by the school registrar. In addition, the teachers and parent/guardians of the student participants were invited to participate. Sixteen teachers and 25 parents consented to participate.

Table 1
Student Demographics

	Mexican heritage, in Bilingual Education (N=21)	Mexican heritage, not in Bilingual Education (N=14)	Not of Mexican heritage (N= 13)
% Male Participants	29	50	47
% Female Participants	71	50	53
% Urban District	28	14	0
% Suburban District	10	14	8
% Rural District	62	72	92
% in Hispanic Majority School	86	64	69
% in School with Hispanic Minority	14	36	31

The students of interest for the purposes of this research were Hispanic students of Mexican origin, enrolled in 5th grade, who attended school in a district in which bilingual programming and/ or English as a Second Language (ESL) support is offered through the 5th grade. The total number of students of Mexican heritage that completed the measures for this study was 39. The total number of students who were not of Mexican heritage and who completed the measures was 16 (See Table 1). In total, 13 students chose to respond in Spanish to the questionnaires (23%) and 42 in English

(76%). Two students were excluded from the analyses due to the recency of their arrival in the district. Five students (two of them Mexican-heritage) had missing data on the psychological resiliency measure, and were excluded from all analyses. A total of 15 teachers participated in the study as well. One of the teachers who consented to participate did not have any students who returned permission and consent forms, and therefore was not given the teacher measure.

Procedures

Active recruiting of participants began in spring 2013 following Institutional Review Board (IRB) approval of this study. A number of administrators in Texas school districts were contacted. The study's goals, the nature of and level of requested participation, the risks, benefits and alternatives to participation were explained to each administrator, and to each participant. Verbal and/or written consent was obtained from district and campus level administrators.

After receiving permission from the superintendent and principal, School A, located in a suburban central Texas school district that offered a bilingual program, opted to participate. Written consent was sought from each teacher after providing the teacher time to think, without being pressured by the presence of the investigator. No coercive means were used to obtain participation. Because the researcher could not find out the ethnic background of each student until after students were recruited, all students in each participating classroom were given packets with permission and consent forms to take home.

Consent was gained from four teachers and the parents of five students in the first district. Student assent was sought from all students who had permission to

participate. Parent questionnaires were sent home with the students whose parents consented to participate. None of the parent questionnaires were returned to the researcher from this group. In fall of the next school year, School A was again invited to participate; however, the superintendent of that school district declined to allow the school to participate, stating that it had not met statewide expectations for performance the previous school year.

Several other districts were invited to participate in fall 2013; one school district in a small, rural Texas town opted to participate. The superintendent of that district selected two schools (Schools B and C) from which participants were invited; both schools' principals allowed their school's participation. A second group of participants were recruited from these two schools. One of the schools (School C) was a self-described "bilingual campus" and the other (School B) did not offer bilingual programming. Four teachers from School C consented to participate. Parental permission was gained from the parents of 28 students. All of the students who were present on the day of data collection opted to participate; however, three students with parental consent were absent and did not participate. From School B, all five 5th grade teachers consented to participate; however, one of the teachers did not receive any signed consent forms from students' parents. Seven of the students from School B received parental consent to participate and six were present on the day that the measures were administered.

In the spring of 2014, attempts were made to recruit more schools for participation. The superintendent of a public charter school in a large urban city agreed to allow one of the schools (School D) to participate. School D was somewhat different from the other schools in the sample, as the 5th grade students attended school on the

same campus as 6th to 12th graders; whereas the other schools had been elementary only campuses. Two teachers consented to participate, one of whom taught students who were considered to be a part of a "self-contained" bilingual cohort. Seven students from this class received parent consent to participate and completed the measures. The second teacher taught all other 5th grade students. From this teacher's classes, four students received consent to participate; however, two of the students from this group declined to participate in the study.

Additional participants were sought in the fall of 2014. In addition to new districts, School B was invited to participate again, as more students from non-bilingual classrooms were needed. Four of the same five teachers continued to teach 5th grade and again consented to participate. Additionally, two of the new 5th grade teachers were invited to participate. One of them declined participation and one of them accepted. From the five teachers who consented to participate, 11 students from four of the classes returned signed parent consent forms. On the day of the administration of the questionnaires, one of the students stated that she could not participate due to having to go to the Gifted and Talented (G/T) classroom at that time.

Once the information/consent form was completed by each teacher, consent forms and permission forms were sent home to the parents of each student in that teacher's classroom. Parents were directed to send the forms back to the school with their child after reviewing them. The researcher came to each school to pick up these forms at a time convenient to the teachers. The administration day, time and place for the student measures were decided with input from the teachers and administrators.

The questionnaires were given to groups of students. The researcher explained the research to students for whom parent permission had been obtained. Student assent was obtained after ensuring that each student understood the purpose of the study, that participation was voluntary, and what s/he was asked to do. Students were given time to think about their decision and to ask questions. Several students did ask questions about the measures, most often asking the researcher to define a word. Upon completing the research measures, each student whose parent had consented to participate was given a stamped and addressed manila envelope that contained the parent questionnaire and demographic form and was asked to give it to their parent/caregiver.

After all measures were completed by the students, one student from each class was selected at random to receive a $5 gift card, which they were given in person on the same day. Each teacher who consented to participate was given a $5 gift card upon returning their completed questionnaire. From the parent questionnaires that were returned via mail to the researcher, one from each district was selected to receive a $50 gift card. In the district that had participants over two school years, one parent from each year was given a gift card.

Once consent and permission were received for a given student, district-level data regarding each of those students was gathered from the registrar. This data included (a) the number of days absent within the previous year, (b) the number of years of enrollment in ESL and/or bilingual programs in the district, (c) the ELL status of the child (also referred to as Limited English Proficient or LEP status), (d) the Special Education status of the child, (e) the Home Language Survey, (f) the STAAR passing

status of each child, (g) the language in which the STAAR was administered, (h) the child's gender and (i) the child's ethnicity.

Following each session of data collection, data was coded and entered into an Excel spreadsheet. All completed forms were stored in a secure receptacle with a lock, in a room that has a locked door. Consent forms and all data will be housed at Texas A&M University for no less than three years following the conclusion of this study.

Measures

Acculturation/ acculturation stress questionnaire

The acculturation/ acculturation stress questionnaire was given to each student participant. This tool was created by Nieri, Lee, Kulis, and Marsiglia (2011) for research in Arizona schools designed to monitor the intervention effects of a drug prevention curriculum provided to Mexican and Mexican-heritage students. These authors created this multi-dimensional measure of acculturation in order to overcome the limitations of previous instruments. To accomplish this, they included items that tapped the dimensions of "linguistic acculturation, attitudinal acculturation, behavioral acculturation, generation status, time in the US, exposure to the origin culture, and ethnic identification" (Nieri et al., 2011, p. 1239). They used empirical and theoretical data to support item inclusion and to describe their findings. Referring to Berry's (1997) four acculturation styles for theory-based comparison, they performed a latent class analysis on the resulting data, and found that five, not four classes of acculturation styles emerged. These were assigned the category descriptions: highly acculturated, less acculturated, marginalized, moderately bicultural and strongly bicultural.

It is notable that in addition to three styles that paralleled those in Berry's model, two bicultural categories emerged. The primary appeal of this instrument and the reason it was chosen for the current study stems from the fact that these authors heuristically integrated theory and their own data to provide more nuanced descriptors of the acculturation styles of their sample. A second reason for using this measure in the present study involves the demographic similarity of the current study to the sample of Nieri et al. (2011). The 1,632 students they surveyed were Mexican or Mexican-heritage 5th graders living in a state that shares a border with Mexico. Due to the similarity with the current sample, this instrument was selected for determining the number of classes of acculturation affiliation. Nieri et al. (2011) did not explicitly report reliability and validity indices of their acculturation scale.

Acculturation class membership was yielded for each child participant from this measure following a Latent Class Analysis statistical procedure. This measure was previously translated into Spanish and the version used by the test authors was used. Written permission to use these measures was provided by their primary author.

Psychological resiliency measure

The Strengths and Difficulties Questionnaire (SDQ) was chosen as the outcome measure for research questions 2, 3, and 4 of the present study. The Strengths and Difficulties Questionnaire was developed by Goodman (2001) at the Institute of Psychiatry in London, and is available as a free download online (www.sdqinfo.org). The SDQ is widely used as a screener for children and adolescents in whom psychopathology is suspected. It has been translated into 70 languages and several

national dialects. For the present study, the English (USA) and Spanish parent/teacher forms and a self-rated version for youth ages 11-17 were used.

There are 25 items on the SDQ that yield scores on five scales: emotional problems, conduct problems, hyperactivity/inattention, peer relationship problems, and one positive scale called prosocial behavior. The Total Difficulties (TD) score is yielded by summing the scores from the first four scales. The appeal of this instrument is manifold. Principally, various studies have empirically validated its use with diverse populations. Studies have found good convergent validity with other widely used instruments (Goodman, 1997), such as the Rutter Questionnaire (Rutter, 1967). Factor analyses generally support the original five-factor structure, particularly in European samples. However, variations in factor structure may exist for U.S. samples (Dickey & Blumberg, 2004). A recent investigation by Ruchkin, Jones, Vermeiren, and Schwab-Stone (2008) found a better fit using a three-factor structure on a large-scale sample of urban youth in the U.S. that included a number of CLD students. The three-factor structure collapses the original five factors into externalizing, internalizing and peer relational factors.

Only one study examining the psychometric properties of the Spanish version of the questionnaire has been published (Rodríguez-Hernández et al., 2012), and this was tested on respondents living in Spain, and not Latin America. In this study, five factors were extracted. Internal reliability across samples tends to be very good, and is often highest for the Total Difficulties score rather than the individual scales. For this reason, and because an empirical base does not exist for estimating the prevalence of specific psychological disorders amongst a Mexican or Mexican-heritage U.S. child sample

(using the SDQ or any other instrument), the Total Difficulties score was used as the study's measure of psychological difficulty.

Each child and parent participant for whom consent was obtained completed an SDQ, which takes about 10 minutes per questionnaire. The official Spanish and American English versions available on the www.sdqinfo.org website were used.

Researcher-generated questionnaires

Researcher-created questionnaires were given to the teachers and parents in order to inform the findings from the formal measures. The set of demographic questions asked of the parents included questions about the child's ethnicity, the family's standard of living, country of origin, family composition and the child's years of enrollment in the current school (see Appendix A). In consideration of results, the data yielded from the parent questionnaires were used only in cases of missing data from the student responses. In three cases, data about the child or parents' country of origin was gathered from the parent questionnaires when the student responded that they did not know this information. This helped to establish the child's eligibility for participation in the study.

The parent acculturation form included questions about the motives for immigration, frequency of cultural practices, acculturation stress from a parent's perspective, the values that the parent has for his/her child, including the desire to maintain a connection with the home culture and the importance of acculturation/assimilation. These dimensions have been indicated as significant by researchers whose work focuses on immigrants to the U.S. (Suárez-Orozco & Suárez-Orozco, 2001).

The researcher-created teacher form asked for background information and posed questions about the teachers' personal and professional experiences that led to their understanding of issues relevant to CLD students. A Likert-type scale was included with questions that tap into the teachers' attitudes, knowledge and skills for working with CLD students. Two questions that require a two- to three- sentence written response were included as well in order to allow the teachers the opportunity to give more elaborate answers.

All researcher-created forms were translated into Spanish by a professional translator, who spoke English and Spanish natively. Following the translation process, a second native Spanish speaker who was also fluent in English verified the translation and any discrepancies were resolved until 100% agreement was gained. Data regarding the percentage of Hispanic students in each school was gathered from the National Center for Education Statistics (2014).

CHAPTER IV

RESULTS

Following the conclusion of all data collection, the data were reviewed to ensure no errors had occurred in data entry. Missing data were inspected and imputed using various strategies depending on the nature of the variable. On the psychological resiliency measure, data were missing from two of the questionnaires completed by the Mexican heritage adolescents (one student was from the bilingual classroom, and the other was not), and from three of the non-Mexican heritage students. Cases with incomplete data were excluded from analyses for all research questions. Casewise deletion is considered a reasonable strategy due to the relatively small number of cases (n=2) with missing data in the Mexican-heritage sample. On the acculturation/ acculturation stress questionnaire, there were no missing items; however, two of the students responded that they did not know where one or both of their parents were born, and one student responded that they did not know their own nation of origin. Fortunately, for these students, additional data had been collected from the parents on the parent questionnaire and the parent responses were used to fill in the missing values. Before data was collected, an alpha level of .05 was selected for tests of significance, in order to reasonably balance the likelihood of making a Type I or Type II error. Following the conclusion of the study, post hoc power analyses were conducted using G*Power 3, and suggested achieved power between .86 and .96, depending on whether the non-Mexican heritage group was included as a third group or not. SPSS Statistics Version 22.0 was used for most analyses, except as noted.

One unexpected result was that twice as many (n=22) Mexican heritage females than males (n=13) participated. It is uncertain what impact this may have had on the results or if there was a non-random cause for this disproportionality. There is no empirical reason to suspect that this altered the results of the measured variables meaningfully or masked any potential effects as there were no significant gender differences in the Total Difficulties scores. Females might be expected to have higher Total Difficulties scores and/or higher scores on the scale measuring emotional problems, whereas boys might be expected to have higher scores on the scale measuring hyperactivity/inattention based upon prior research using self reported data from a Nepalese sample of 11-17 year olds using the SDQ (Rimal & Pokharel, 2013). However, there is no published normative data for the SDQ Self Report measure used in this study that queried youth with a similar ethnic background to the sampled students.

Internal Consistency

The acculturation classes yielded are products of the student responses to a number of type of questions measuring various constructs including generational status, time in the U.S., language use, attitudinal acculturation, behavioral acculturation, and ethnic identity. Internal consistency is not a relevant concern when using an instrument that measures several diverse constructs.

One subset of the questions on this measure included an adapted version of Phinney's Multi-ethnic Identity Measure (MEIM) according to Nieri et al. (2011). These six questions, when considered separately from the other questions, yielded an α of .87 in the sample of Mexican heritage students. This supports the premise that internal consistency was adequately high for one of the major constructs embedded in the

measure. However, ethnic identity was only one of the constructs that contributed to the overall acculturation class membership resulting from the LCA. Therefore, the results of the LCA were used to describe the acculturation class membership of each child.

Educational Context and Acculturation

The first research question was whether Mexican-heritage students who are in bilingual education are more likely to express a bicultural type than Mexican-heritage students who are not in bilingual education. It was hypothesized that Mexican-heritage students who are currently in bilingual education classes would be more likely to express a bicultural type, as measured by acculturation class, than Mexican-heritage students who are not in bilingual education.

Acculturation is a complex construct that theoretically consists of related sub-constructs including attitudinal and behavioral components. At present, there are few measures of acculturation that adequately account for the multiple factors that contribute to an individual's acculturation status. An instrument created by Nieri et al. (2011) was selected for use with this sample. Nieri et al. (2011) performed a Latent Class Analysis (LCA) using this instrument on a large sample of Mexican-heritage fifth graders. From the resulting data, five, not four classes of acculturation styles emerged. These were assigned the category descriptions: highly acculturated, less acculturated, marginalized, moderately bicultural, and strongly bicultural. In addition to three styles that paralleled those in Berry's model, two bicultural categories emerged from their analyses.

For the current study, the method used to interpret this acculturation instrument comes from examining the results of a Latent Class Analysis with the sample of interest. A Latent Class Analysis was conducted using the procedures outlined in Nieri et al.

(2011) to determine the class membership of each student based upon their responses to the acculturation questionnaire. The statistical software package MPlus 7 (Muthén & Muthén, 2012) was used to conduct these analyses. An exploratory LCA was conducted to determine the model that best fit the data, beginning with analysis of a potential five-class solution, as Nieri et al. found. Model fit was determined based on the values of the Akaike and Bayesian Information Criteria (AIC and BIC) and tests of significance of the difference in loglikelihood (LL) ratios. A four- class solutions was tested based upon prior theory (Berry, 1997). Two- and three- class solutions also were tested to examine whether a smaller number of classes could be supported, potentially leading to a more parsimonious description of class membership.

The resulting analyses revealed that a five-class solution did not fit the data (AIC= 642.81, BIC= 802.30, LL= -222.41). The three- and four- class solutions were nested models, which were interpreted using the same class membership descriptors as those used by Nieri et al. (2011). The four-class solution revealed two classes of bicultural students (a high- and a low- bicultural group) and a more acculturated group as well as a less acculturated group (AIC= 611.57, BIC= 738.83, LL= -226.78). The three-class solution retained the more acculturated (n=12) and less acculturated (n=6) groups and combined the bicultural groups into one class (n=17) (AIC= 593.78, BIC= 688.83, LL= -237.89). A two-class solution appeared to yield the best fit (AIC= 584.28, BIC= 647.11, LL= -253.14); however, this analysis categorized the less acculturated students in the same class as the bicultural students. Essentially, the two-class solution divided respondents along only one dimension – that of acculturation to the U.S. mainstream culture. Since the class membership of interest for the purposes of this study was the group of students who identified as bicultural, the three-class solution was retained, as it grouped students who were bicultural into one group. Based upon this analysis, students were classified as either bicultural or not bicultural (i.e. more closely

identifying with either U.S. or Mexican culture).

Based upon the results of the LCA, categorical acculturation class membership across members in the two groups Mexican-heritage students in bilingual classroom, Mexican-heritage students not in bilingual education) was coded (bicultural or not bicultural). The means of the values in each group were compared using a Chi Square test procedure in SPSS Statistics, Version 22.0: Pearson Chi sq. = 1.54, df =1, Asympt sig. =.21. Although the assumptions of Chi sq. (independence of groups and use of categorical data) were met, the null hypothesis was not rejected, indicating that the bicultural students (n=17) were no more or less likely to be in bilingual classes than students who were not bicultural (n=18). Following this analysis, the three acculturation classes that were yielded from the exploratory LCA were also compared in reference to their school setting, to determine whether the combining of the higher and lower acculturated classes made a significant difference in the findings. However, there were no statistically significant differences based upon a one-way ANOVA (p =.55) suggesting that combining higher and lower acculturated students into one group did not meaningfully impact the findings.

Educational Context and Psychological Functioning

The next research question investigated whether Mexican-heritage students who are in bilingual education classrooms demonstrate better psychological health, when compared to Mexican-heritage students who are not in bilingual education or non-Mexican heritage students. It was hypothesized that Mexican-heritage students who are in bilingual education would demonstrate better psychological health, as measured by a lower Total Difficulties score on the SDQ, when compared to Mexican-heritage students

who have been primarily instructed in English speaking classrooms; however, there was no anticipated difference in the psychological health of students in bilingual education when compared to students of other ethnicities.

The continuous variable representing psychological health (SDQ) was compared between the three groups (Mexican heritage not in bilingual education, Mexican heritage in bilingual education, and non-Mexican heritage not in bilingual education) using an ANOVA procedure. Assumptions for ANOVA (homogeneity of variances, normality of distributions for each group) were tested and were reasonably met. The assumption of independence of observations was also reasonably met; however it was taken into consideration that some students who were in bilingual classrooms received at least part of their instruction from a different teacher than their peers not in bilingual classrooms. This was not considered to be highly problematic in relation to this assumption. Descriptive analysis for the continuous outcome variable of SDQ Total Difficulties Score was conducted prior to other analyses (see Table 2). For the one-way ANOVA, the null hypothesis was not rejected [$F(2,45)=1.86$, $p=.16$] (see Table 3). The psychological well-being of the three group of students did not appear to be statistically significantly related to their classroom setting.

Table 2
Descriptive Analyses for SDQ Total Difficulties Score by Group

Group	N	Mean	Standard Deviation	Minimum	Maximum
Mexican Heritage, Not in Bilingual Classroom	14	13.36	4.53	8	25
Mexican Heritage, in Bilingual Classroom	21	13.05	4.94	5	22
Not of Mexican Heritage	13	10.15	4.94	2	18

Table 3
One Way ANOVA Comparing Three Group Means for Classroom Setting by SDQ score

Source	df	Sum of Squares	Mean Squares	F Ratio	Significance (*p*)
Between Groups	2	87.12	43.56	1.86	.16
Within Groups	45	1049.85	23.33		
Total	47	1136.97			

Acculturation Style and Psychological Functioning

The third research question investigated whether expressing a bicultural type would predict better psychological health for Mexican heritage students. It was hypothesized that expressing a bicultural type, as measured by response to a multi-dimensional acculturation questionnaire, would predict better psychological health amongst Mexican heritage students, as measured by a lower Total Difficulties score on the SDQ. It was further hypothesized that being in a school with a higher percentage of

Hispanic students would predict better psychological health for Mexican heritage students, and that this influence must be controlled for.

Table 4
Predictors of SDQ Score by Percent of Hispanic in School and Acculturation Class

Outcome		**Predictor**	***B***	***S.E. B***	***p***
SDQ	Step 1	Percent of Hispanic in School	<.01	.02	.88
	Step 2	Acculturation class	-1.01	.81	.21

Following an examination of data to assure that the assumptions of logistic regression were reasonably met, a logistic regression was conducted using the categorical acculturation class as predictors, and the dichotomous variable of better or poorer psychological health, based upon a clinically derived cut score on the SDQ, as the criterion. Percentage of Hispanic children in the school was entered as a covariate. In School A, 85% of children were Hispanic; in School B, 41% of children were Hispanic; in School C, 67% of children were Hispanic; in School D, 84% of children were Hispanic. Acculturation class was entered as a categorical variable, and was thus dummy coded. Based upon the consideration of all variables, an omnibus test of model coefficients did not yield statistically significant results (Chi. Sq.= 1.63, df=2, p=.44). In the first step of the regression, percentage of Hispanic students in the school did not significantly predict psychological well-being (B <.01, Standard Error of B (S.E. B) = .02, Wald= .02, df=1, p=.88). The odds ratio (OR) was .99, suggesting that the predictive value of the percentage of Hispanic students in the school had virtually no practical

significance. In the second step, adding the variable of acculturation class did not contribute to the predictive value of the model (*B*= -1.01, S.E. = .81, Wald= 1.55, df=1, *p*=.21, OR=.362). See Table 4.

Acculturation Stress and Psychological Functioning

The fourth research question investigated whether lower acculturation stress would predict better psychological health. It was hypothesized that controlling for generation status and percentage of Hispanic children in the school, lower acculturation stress, as measured by raw score on the item relating to acculturation stress on the acculturation questionnaire, would predict better mental health amongst Mexican heritage students, as measured by a lower Total Difficulties score on the SDQ (using a clinically derived cut score). Following an examination of data to assure that the assumptions of logistic regression were reasonably met, a logistic regression was conducted using the variable of better or poorer psychological health as the criterion, based upon the Total Difficulties score on the SDQ. In the first step, generation status and percentage of Hispanic children in each school were entered. The score for acculturation stress was entered in the second step. Based upon the consideration of all variables in the model, an omnibus test of model coefficients did not yield statistically significant results at Step 1 (Chi. Sq.= .66, df=2, *p*=.71). In the first step of the regression, neither generation status (Wald= .64, df=1, *p*=.42, OR=.51) nor percentage of Hispanic students in the school (Wald<.01, df=1, *p*=.93, OR= .99) significantly predicted psychological well-being. In the second step, adding the variable of acculturation stress improved the overall model fit based upon an omnibus test of model

coefficients (Chi. Sq.= 2.536, df=3, *p*=.46); however, it was not found to significantly predict psychological health (Wald= 1.75, df=1, *p*=.18, OR=1.4). See Table 5.

Table 5
Predictors of SDQ score by Generation Status, Percentage of Hispanic in School and Acculturation Stress Score

Outcome	**Step**	**Predictors**	**B**	**S.E. B**	***p***
SDQ	1	Generation Status	-.20	.93	.82
		Percentage of Hispanic in School	< .01	.02	.85
	2	Acculturation Stress	.33	.25	.18

Based upon the model summary statistics, the addition of the acculturation stress variable did improve the overall predictive value of the model as a whole. With all three independent variables in the model, between seven and ten percent of the variability of the outcome variable was predicted, as indicated by the Cox & Snell R Squared and the Nagelkerke R Squared values. This is compared to the one to two percent of the model explained with only the first set of predictor variables entered.

CHAPTER V

SUMMARY AND CONCLUSIONS

At the inception of this study, the existing body of research that examined the rates of psychological problems found amongst Hispanic children and adolescents was equivocal. Due to myriad factors that may impact psychological health, it is somewhat understandable that different studies have produced differing results. This may be due in part to the failure to consider factors such as generational status, level of acculturation, and other individual variables that may influence a young person's well-being. The optimism that first generation immigrants often express regarding their lives post-migration may constitute a protective factor, at least initially, against the insults of poverty, marginalization and discrimination that they may face upon arrival to the U.S. Diminished social and academic trajectories in later adolescence and early adulthood, and the outcomes of their offspring, however, form an interesting paradox that has more recently become the focus of social scientists. The increasing numbers of Hispanic children in the U.S. make questions about their well-being increasingly relevant. In this light, the question of whether or not Mexican heritage children in bilingual classrooms would express a greater level of psychological well-being was a principle focus of this study.

Implications

It was hypothesized that children of Mexican heritage who had learned within bilingual classroom settings would benefit from this exposure to a degree that would be measurable when considering their psychological health. The findings from the present

study were unable to support this hypothesis. Additionally, the Mexican heritage students within bilingual classrooms in this study were not more likely to belong to a bicultural acculturation class than the students of Mexican heritage who were not in bilingual classrooms. Five of the students in School B had in previous years been enrolled in bilingual classes, which might have affected this result. In addition, there are likely other influences, not related to the school setting, that influence the acculturation class membership of Mexican-heritage students.

Another primary variable of interest was the acculturation style of the preadolescents in the study. Identity development, including ethnic identity development, is a principle task of adolescence, although it may occur in the late childhood years for some youth, especially those who are ethnic minority members. A paucity of research exploring this issue prompted the question of whether being bicultural would confer some benefits to the well-being of Mexican-heritage youth. Again, the data from the current investigation do not support this assertion.

A measure of acculturation class membership that had been created for use in a large-scale study of Mexican heritage youth was adopted in the present study. One finding of potential practical significance concerns the data yielded from this measure. As Nieri and colleagues (2011) asserted, consideration of acculturation should include multidimensional variables that align along both axes of home culture and host culture. The results of the Latent Class Analyses that were conducted as part of this study support the existence of two types of bicultural classes of individuals, in addition to individuals who would not be considered bicultural due to being more aligned with the values, attitudes and cultural practices of either the home or the host culture. This result

may provide a modest contribution to the literature for researchers interested in the measurement of acculturation, although these findings did not directly answer any research question posed in this study.

Results from the regression analyses conducted in this study failed to detect a statistically significant contribution made by any of the variables studied for the prediction of better psychological well-being for Mexican heritage students. Although neither student generation status nor percentage of Hispanic students in the school predicted well-being for Mexican heritage students, the addition of the variable measuring acculturation stress added to the predictive value of the model in the fourth research question analysis. This suggests that acculturation stress might impact well-being for Mexican-heritage students, although not to a degree that was statistically significant in this study.

A particularly interesting finding was that the percentage of Hispanic students in the school appeared to have almost no predictive value for the psychological health of the Mexican heritage students in the study. Prior research would suggest that the larger a proportion of peers of similar ethnicity there are in a student's school, the better the student's emotional and behavioral outcomes are predicted to be. Three of the schools in the current study had a Hispanic majority of students, while one had a large minority of Hispanic students. There may not have been enough variation amongst the percentages in each school to determine whether this variable meaningfully impacted the well-being of Mexican-heritage students. In addition, prior research in this area has examined a number of other possibly related variables of interest, including the frequency and nature of intergroup contact (whether positive or negative); social support from parents,

teachers and peers; as well as academic achievement. Clearly, the relationship between social context and individual well-being is complex and involves numerous, possibly interrelating factors.

Limitations

It is often observed in the absence of expected findings, that a small sample size may have been the primary culprit accounting for the failure to detect statistical significance. Such is likely the situation in this study. An a priori power analysis suggested that the presence of 48 respondents would be necessary for detecting differences among three independent groups. Indeed, 48 students were analyzed in one of the planned analyses that took advantage of the existence of three distinct groups of respondents. For the analyses consisting of two groups of Mexican heritage students, the desired number of participants (40) was not reached, in spite of sustained attempts to recruit subjects from numerous school districts. A larger sample of students may have led to greater power to detect differences between and amongst the groups. However, if there is truly no relationship amongst the measured variables, data from a larger sample would not be expected to yield different results.

A related limitation stems from the absence of students enrolled in ESL programs in the current sample. This was an unexpected result of recruiting efforts. It is possible that the districts in which bilingual programs exist do not consider the need to provide alternate language support options for ELL students who are not enrolled in bilingual education. This is considered a limitation in that the students served by ESL programs are also a population of interest, whose psychological health profiles may differ from those students served in different types of programs.

A related limitation stems from the nature of the bilingual programs that were sampled. Namely, all of the schools in the current study utilized a transitional model, not a developmental (maintenance) model of bilingual education. In a transitional model, academic subjects are taught in the early elementary school years largely in the home language of the students. By fifth grade, instructional language shifts so that most, if not all, of the academic content is delivered in English. This is a commonly utilized model in public schools in Texas. In the current study, however, this may mean that the hypothesized effect of the bilingual condition was weakened by decreased exposure to the home language since original school entry.

Another limitation comes from the loss of data due to the students who were not sampled. Part of the difficulty of conducting research in schools comes from the multiple levels of consent that are required in order to gather sample data. Refusals at all levels of consent (district, school, classroom teacher, parent, and student) occurred in this study. The reason for these refusals cannot be accurately determined and therefore cannot be ruled out as being related to the constructs of interest. A related limitation stems from the potential for selection bias in this study. Namely, the hypothesized impact of various learning environments was examined without including factors related to the teacher characteristics. It is possible that subject-level variables (e.g. individual characteristics of the teachers) may have masked a true effect as these variables were not considered in the present study.

Other possible limitations are related to the age and developmental level of the respondents in this study. Poorer behavioral and academic outcomes are often observed amongst at-risk students (including Latino students) in middle and high school. While a

goal of the current study was to examine the possible early indicators of later problematic behavior, it is possible that these indicators do not begin to surface until students enter secondary school.

Finally, it is possible that the effects of societal variables that are difficult to measure may have been present. During the two years of data collection, a number of factors potentially impacting the psychological health of the sample students or other studied factors were observed in the broader culture. In Texas in the 2011-12 school year, state funding for public schools was cut by over five billion dollars. The total impacts of this reduction cannot be estimated, although they are possibly far-reaching. Another potential variable at play is the rise in the social and cultural landscape of awareness of immigration-related news stories, especially following the surge of unaccompanied minors crossing into the U.S. from Latin America in 2014. The changing social and cultural landscape may have potentially affected the children in this study to an unknown degree.

Directions for Future Research

In spite of the lack of statistically significant findings, a strength of the current study lies in the overall design. Care was taken to avoid many of the methodological shortcomings of prior research concerning variables affecting Latinos. Close consideration was given to a variety of factors potentially involved in the education, development and acculturation of Mexican heritage fifth grade students in Texas. It is left to future research to thoughtfully seek answers to the questions that will lead to unpacking and understanding the Immigrant Paradox.

It is possible that longitudinal research using a larger, multigenerational sample of students could make clearer the relationship between variables. If there is truly no relationship amongst the variables of interest in this study, future research could corroborate this. Other factors such as school climate and belongingness also need to be considered. Future research is needed to examine the differential social and emotional expression and needs of immigrant children across development levels. Various language environments and types of bilingual classrooms should be a basis of comparison and possible zone of intervention. The potential potency of the "treatment" of bilingual education may be stronger for students who experience a maintenance model of bilingual education.

*Author's note: the schools from which students, parents, and teachers were sampled have not examined the results of the analyses prior to publication, and do not explicitly endorse these findings. The content of this document does not reflect any position or expression of any of the school districts, their boards of trustees or their administrations.

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APPENDIX A

STRENGTHS AND DIFFICULTIES QUESTIONNAIRES IN ENGLISH

Strengths and Difficulties Questionnaire **P or T 11-17**

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of this young person's behavior over the last six months or this school year.

Young person's name ..... Male/Female

Date of birth.....

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other youth, for example books, games, food	☐	☐	☐
Often loses temper	☐	☐	☐
Would rather be alone than with other youth	☐	☐	☐
Generally well behaved, usually does what adults request	☐	☐	☐
Many worries or often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other youth or bullies them	☐	☐	☐
Often unhappy, depressed or tearful	☐	☐	☐
Generally liked by other youth	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often lies or cheats	☐	☐	☐
Picked on or bullied by other youth	☐	☐	☐
Often offers to help others (parents, teachers, children)	☐	☐	☐
Thinks things out before acting	☐	☐	☐
Steals from home, school or elsewhere	☐	☐	☐
Gets along better with adults than with other youth	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Good attention span, sees work through to the end	☐	☐	☐

Signature ..... Date .....

Parent / Teacher / Other (Please specify):

Thank you very much for your help

Strengths and Difficulties Questionnaire

S [11-17]

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain . Please give your answers on the basis of how things have been for you over the last six months.

Your name..... Male/Female

Date of birth.....

	Not True	Somewhat True	Certainly True
I try to be nice to other people. I care about their feelings	☐	☐	☐
I am restless, I cannot stay still for long	☐	☐	☐
I get a lot of headaches, stomach-aches or sickness	☐	☐	☐
I usually share with others, for example CD's, games, food	☐	☐	☐
I get very angry and often lose my temper	☐	☐	☐
I would rather be alone than with people of my age	☐	☐	☐
I usually do as I am told	☐	☐	☐
I worry a lot	☐	☐	☐
I am helpful if someone is hurt, upset or feeling ill	☐	☐	☐
I am constantly fidgeting or squirming	☐	☐	☐
I have one good friend or more	☐	☐	☐
I fight a lot. I can make other people do what I want	☐	☐	☐
I am often unhappy, depressed or tearful	☐	☐	☐
Other people my age generally like me	☐	☐	☐
I am easily distracted, I find it difficult to concentrate	☐	☐	☐
I am nervous in new situations. I easily lose confidence	☐	☐	☐
I am kind to younger children	☐	☐	☐
I am often accused of lying or cheating	☐	☐	☐
Other children or young people pick on me or bully me	☐	☐	☐
I often offer to help others (parents, teachers, children)	☐	☐	☐
I think before I do things	☐	☐	☐
I take things that are not mine from home, school or elsewhere	☐	☐	☐
I get along better with adults than with people my own age	☐	☐	☐
I have many fears, I am easily scared	☐	☐	☐
I finish the work I'm doing. My attention is good	☐	☐	☐

Your Signature .....

Today's Date .....

Thank you very much for your help

APPENDIX B

STRENGTHS AND DIFFICULTIES QUESTIONNAIRES IN SPANISH

Cuestionario de capacidades y dificultades (SDQ-Cas)

Por favor, ponga una cruz en el cuadro que usted cree que corresponde a cada una de las preguntas: No es cierto, Un tanto cierto, Absolutamente cierto. Nos sería de gran ayuda si respondiese a todas las preguntas lo mejor que pudiera, aunque no esté completamente seguro/a de la respuesta, o le parezca una pregunta rara. Por favor, responda a las preguntas basándose en el comportamiento del niño/a durante los últimos seis meses o durante el presente curso escolar.

Nombre del niño/a ..... Varón/Mujer

Fecha de nacimiento.....

	No es cierto	Un tanto cierto	Absolutamente cierto
Tiene en cuenta los sentimientos de otras personas	☐	☐	☐
Es inquieto/a, hiperactivo/a, no puede permanecer quieto/a por mucho tiempo	☐	☐	☐
Se queja con frecuencia de dolor de cabeza, de estómago o de náuseas	☐	☐	☐
Comparte frecuentemente con otros niños/as chucherías, juguetes, lápices, etc	☐	☐	☐
Frecuentemente tiene rabietas o mal genio	☐	☐	☐
Es más bien solitario/a y tiende a jugar solo/a	☐	☐	☐
Por lo general es obediente, suele hacer lo que le piden los adultos	☐	☐	☐
Tiene muchas preocupaciones, a menudo parece inquieto/a o preocupado/a	☐	☐	☐
Ofrece ayuda cuando alguien resulta herido, disgustado, o enfermo	☐	☐	☐
Está continuamente moviéndose y es revoltoso	☐	☐	☐
Tiene por lo menos un/a buen/a amigo/a	☐	☐	☐
Pelea con frecuencia con otros niños/as o se mete con ellos/ellas	☐	☐	☐
Se siente a menudo infeliz, desanimado o lloroso	☐	☐	☐
Por lo general cae bien a los otros niños/as	☐	☐	☐
Se distrae con facilidad, su concentración tiende a dispersarse	☐	☐	☐
Es nervioso/a o dependiente ante nuevas situaciones, fácilmente pierde la confianza en sí mismo/a	☐	☐	☐
Trata bien a los niños/as más pequeños/as	☐	☐	☐
A menudo miente o engaña	☐	☐	☐
Los otros niños se meten con él/ella o se burlan de él/ella	☐	☐	☐
A menudo se ofrece para ayudar (a padres, maestros, otros niños)	☐	☐	☐
Piensa las cosas antes de hacerlas	☐	☐	☐
Roba cosas en casa, en la escuela o en otros sitios	☐	☐	☐
Se lleva mejor con adultos que con otros niños/as	☐	☐	☐
Tiene muchos miedos, se asusta fácilmente	☐	☐	☐
Termina lo que empieza, tiene buena concentración	☐	☐	☐

Firma ..... Fecha .....

Madre/padre/maestro/otros (indique, por favor:)

Muchas gracias por su ayuda

Cuestionario de capacidades y dificultades (SDQ-Cas)

Por favor pon una cruz en el cuadro que creas que corresponde a cada una de las preguntas: No es verdad, Es verdad a medias, Verdaderamente sí. Es importante que respondas a todas las preguntas lo mejor que puedas, aunque no estés completamente seguro/a de la respuesta, o te parezca una pregunta rara. Por favor, responde a las preguntas según como te han ido las cosas en los últimos seis meses.

Nombre ..... Varón/Mujer

Fecha de nacimiento.....

	No es verdad	Es verdad a medias	Verdaderamente sí
Procuro ser agradable con los demás. Tengo en cuenta los sentimientos de las otras personas	☐	☐	☐
Soy inquieto/a, hiperactivo/a, no puedo permanecer quieto/a por mucho tiempo	☐	☐	☐
Suelo tener muchos dolores de cabeza, estómago o náuseas	☐	☐	☐
Normalmente comparto con otros mis juguetes, chucherías, lápices, etc	☐	☐	☐
Cuando me enfado, me enfado mucho y pierdo el control	☐	☐	☐
Prefiero estar solo/a que con gente de mi edad	☐	☐	☐
Por lo general soy obediente	☐	☐	☐
A menudo estoy preocupado/a	☐	☐	☐
Ayudo si alguien está enfermo, disgustado o herido	☐	☐	☐
Estoy todo el tiempo moviéndome, me muevo demasiado	☐	☐	☐
Tengo un/a buen/a amigo/a por lo menos	☐	☐	☐
Peleo con frecuencia con otros, manipulo a los demás	☐	☐	☐
Me siento a menudo triste, desanimado o con ganas de llorar	☐	☐	☐
Por lo general caigo bien a la otra gente de mi edad	☐	☐	☐
Me distraigo con facilidad, me cuesta concentrarme	☐	☐	☐
Me pongo nervioso/a con las situaciones nuevas, fácilmente pierdo la confianza en mí mismo/a	☐	☐	☐
Trato bien a los niños/as más pequeños/as	☐	☐	☐
A menudo me acusan de mentir o de hacer trampas	☐	☐	☐
Otra gente de mi edad se mete conmigo o se burla de mí	☐	☐	☐
A menudo me ofrezco para ayudar (a padres, maestros, niños)	☐	☐	☐
Pienso las cosas antes de hacerlas	☐	☐	☐
Cojo cosas que no son mías de casa, la escuela o de otros sitios	☐	☐	☐
Me llevo mejor con adultos que con otros de mi edad	☐	☐	☐
Tengo muchos miedos, me asusto fácilmente	☐	☐	☐
Termino lo que empiezo, tengo buena concentración	☐	☐	☐

Firma ..... Fecha .....

Muchas gracias por tu ayuda

APPENDIX C

ACCULTURATION/ ACCULTURATION STRESS QUESTIONNAIRES*

	United States	Mexico	Other country . . . . .Which?		I don't know
1) Where were you born?	O	O	O	_____	O
2) Where was your mother born?	O	O	O	_____	O
3) Where was your father born?	O	O	O	_____	O

	Less than 1 year	Between 1 and 5 years	Between 6 and 10 years	More than 10 years	All my life
4) How long have you lived in the United States?	O	O	O	O	O

5) Are the following situations a <u>problem</u> for you?	Big problem	Small problem	Not a Problem
I get upset at my parents because they don't know American ways.	O	O	O
My family thinks I'm becoming "too American."	O	O	O
I don't feel at home here in the United States.	O	O	O
I am embarrassed by the way I speak English.	O	O	O
I don't look like I belong in this country.	O	O	O
I argue with friends because we are from different cultures.	O	O	O
My teachers don't understand my culture.	O	O	O

*Items printed with permission from Dr. Tanya Nieri. See "Acculturation among Mexican-heritage preadolescents: A latent class analysis" by Nieri, Lee, Kulis, & Marsiglia, (2011). *Social Science Research*, *40*(4), 1236-1248.

6) Choose <u>one best</u> ethnic category which describes:	**Mexican**	**Mexican American or Chicano**	**Other Latino/ Hispanic (example: Puerto Rican, Salvadoran)**	**American Indian or Alaskan Native**	**African American or Black**	**Asian or Pacific Islander**	**White**	**Other category**
...You	O	O	O	O	O	O	O	O
...Your mother	O	O	O	O	O	O	O	O
...Your father	O	O	O	O	O	O	O	O
...Your best friend	O	O	O	O	O	O	O	O

7) Think about the ethnic group you just chose to describe <u>you</u>. How much do you agree or disagree with these statements about your ethnic group? (Some people think of their ethnic group as race or culture.)	**Strongly agree**	**Agree**	**Disagree**	**Strongly disagree**
I have tried to learn more about my own ethnic group, such as its history and customs.	O	O	O	O
I have often talked to other people, like my parents, to learn more about my ethnic group.	O	O	O	O
I am happy to be part of my ethnic group.	O	O	O	O
I feel like I really belong to my own ethnic group.	O	O	O	O
I'm very proud of my ethnic group and its accomplishments.	O	O	O	O
I am involved in the customs, such as food, music or celebrations, of my own ethnic group.	O	O	O	O

	Strongly Agree	Agree	Disagree	Strongly Disagree
8) I like the way things are done in the culture my family comes from.	O	O	O	O
9) I like the way things are done in the United States.	O	O	O	O

	The United States	The country my family originally came from	Both Places	Neither Place
10) The way I do things is mostly like the way they do things in:	O	O	O	O

	Never	In the last year	In the last 3 years	More than 3 years ago
11) Have you visited family or friends who live outside the United States?	O	O	O	O

	English only	Mostly English	Both English & Spanish	Mostly Spanish	Spanish only	Some other language most of the time	Which language?
12) When talking with <u>family members</u>, what language do you usually speak?	O	O	O	O	O	O	_____
13) When talking with <u>friends</u>, what language do you usually speak?	O	O	O	O	O	O	_____
14) When you watch TV, listen to the radio, or listen to music, in what language do you usually listen?	O	O	O	O	O	O	_____

	Estados Unidos	México	Otro país . . . . .¿Cuál?		No sé
1) ¿Dónde nacíste?	O	O	O	_____	O
2) ¿Dónde nació tu madre?	O	O	O	_____	O
3) ¿Dónde nació tu padre?	O	O	O	_____	O

	Menos de 1 año	Entre 1 y 5 años	Enter 6 y 10 años	Más de 10 años	Toda mi vida
4) ¿Cuánto tiempo has vivido en los Estados Unidos?	O	O	O	O	O

5) ¿Son las siguientes situaciones un problema para tí?	Un problema grande	Un problema pequeño	Ningún problema
Me molesto con mis padres por que ellos no conocen la forma de vida americana.	O	O	O
Mi familia piensa que me estoy volviendo "muy americano."	O	O	O
No me siento en casa aquí en los Estados Unidos.	O	O	O
Me da pena la manera en que yo hablo el Inglés.	O	O	O
No luzco (no me veo) como la gente en este país.	O	O	O
Discuto con mis amigos por que pertenecemos a diferentes culturas.	O	O	O
Mis maestros no entienden mi cultura.	O	O	O

6) Escoge <u>un grupo</u> étnico que mejor describa:	**Mexicano**	**Mexicano-Americano o Chicano**	**Otro Latino/ Hispano (ejemplo: Puerto Riqueño, Salvadoreño)**	**Indio Americano o Nativo de Alaska**	**Afro Americano o Negro**	**Asiático o Pacífico Isleño**	**Blanco**	**Otra categoría**
...a ti	O	O	O	O	O	O	O	O
...a tu madre	O	O	O	O	O	O	O	O
...a tu padre	O	O	O	O	O	O	O	O
...a tu mejor amigo(a)	O	O	O	O	O	O	O	O

7) Piensa acerca de el grupo étnico que tú escogiste y que más te describe a ti. ¿Qué tanto estás de acuerdo o en desacuerdo con los siguientes comentarios acerca de tu grupo étnico? (Algunas personas piensa de su grupo étnico como una raza o cultura.)	**Muy de acuerdo**	**De acuerdo**	**En desacuerdo**	**Muy en desacuerdo**
He tratado de aprender más acerca de mi grupo étnico, como su historia y costumbres.	O	O	O	O
He hablado con otra gente, como mis padres, para aprender de mi grupo étnico.	O	O	O	O
Estoy contento de pertenecer a mi grupo étnico.	O	O	O	O
Siento que realmente pertenezco a mi grupo étnico.	O	O	O	O
Estoy muy orgulloso de mi grupo étnico y sus logros.	O	O	O	O
Participo en las costumbres, como la comida, música o celebraciones, de mi grupo étnico.	O	O	O	O

	Muy de acuerdo	De acuerdo	En desacuerdo	Muy en desacuerdo
8) A mí me gusta la manera como se hacen las cosas en la cultura de donde viene mi familia.	O	O	O	O
9) A mí me gusta como se hacen las cosas aquí en Estados Unidos.	O	O	O	O

	Los Estados Unidos	El país de donde llegó originalmente mí família	Ambos lugares	Ningún lugar
10) La manera como yo generalmente hago las cosas es como generalmente las hacen en	O	O	O	O

	Nunca	En el último año	En los 3 ultimos años	Hace mas de 3 años
11) ¿Has visitado a tu familia o amigos que viven fuera de los Estados Unidos?	O	O	O	O

	Unica-mente Inglés	General-mente Inglés	Ambos Inglés y Español	General-mente Español	Unica-mente Español	Otro lenguaje casí todo el tiempo	.....¿Cuál lenguaje?
12) ¿Cuando hablas con los miembros de tu <u>familia</u>, qué lenguaje generalmente hablas?	O	O	O	O	O	O	_____
13) ¿Cuando hablas con tus <u>amigos</u>, qué lenguaje generalmente hablas?	O	O	O	O	O	O	_____
14) ¿Cuando miras la TV, escuchas la radio o escuchas música, en qué lenguaje generalmente escuchas?	O	O	O	O	O	O	_____

APPENDIX D

TEACHER QUESTIONNAIRE IN ENGLISH

1. In which type of classroom do you teach?
   A. I teach bilingual students in both languages (Spanish and English)
   B. I teach bilingual students in Spanish
   C. I teach bilingual students in English
   D. I teach in a monolingual classroom in English

   **If you teach in a bilingual classroom, what percentage of the total instruction is delivered in Spanish? _____ %
   What subjects are taught in Spanish?_____

2. What teaching certifications do you hold?
   A. I am a bilingual certified teacher
   B. I am bilingual, but not certified as such
   C. I am an ESL certified teacher
   D. I do not possess ESL or bilingual certification

3. What is the home language of the students in your class?
   A. As far as I know, they all speak English at home.
   B. As far as I know, most speak Spanish at home.
   C. Most speak English at home. Some speak Spanish at home.
   D. I am unsure what languages my students speak at home.
   E. Other (Please describe) _____

4. In what languages are you proficient?
   A. English only
   B. English and Spanish
   C. Other _____

5. What is the first language that you learned to speak as a child?
   A. English
   B. Spanish
   C. Other _____

6. For how many years have you had a child or children in your class whose home language is not English?
   A. 1-2 years
   B. 3-5 years
   C. 6-8 years
   D. 9 or more years

7. How many years have you been teaching in U.S. public schools? _____

8. Have you ever lived in a country where a language other than English is spoken?
Yes No If so, what language? _____

9. Have you ever travelled to a country where a language other than English is spoken?
Yes No

Please respond to the following questions using one of these responses:

A. Strongly Agree, B. Agree, C. Disagree, D. Strongly Disagree

10. I believe that students benefit from learning about their family's culture(s) ___

11. I believe that students' home cultures should be integrated into school curriculum, either formally or informally ___

12. I think that students' English language skills are enhanced if they also learn to speak another language fluently ___

13. I think that all students benefit from having culturally diverse students as peers in the classroom ___

14. I try to make regular contact with the parents of my students whose home language is other than English ___

15. I attempt to integrate information from my students' home cultures into my teaching and/or into the classroom environment ___

Please respond to the following questions in 2-3 sentences:

16. What experiences (including your teacher training program or other life experiences) have most prepared you to work with culturally and linguistically diverse (CLD) children? _____
_____

17. To what extent do you think teachers are responsible for transmitting the values and cultural practices of the U.S. mainstream to their CLD students?

_____

APPENDIX E

PARENT/ GUARDIAN DEMOGRAPHIC QUESTIONNAIRE IN ENGLISH

1. What is your relationship to this child? _____
2. How long has your child attended his or her current school?
   _____ years _____ months

3. How many persons (including the child) live in your household? _____

4. Which adults live in the same home as the child? (check all that apply)
___ Mother ___ Father ___ grandma ___ grandpa ___ aunt ___ uncle
___ Step Mother ___ Step Father ___ non-parent guardian ___ other

5. What is the highest level of education of any adult in the child's home?
   a. Some grade school, but did not go to high school
   b. Some high school, but did not graduate
   c. High school graduate
   d. Some college
   e. Graduated from college, university or technical school

6. Was the child born in this country? _____
   If no, please state the country where the child was born _____

7. If the child was born in another country, how old was the child when he/she moved to the U.S.? _____

8. Were both of the child's parents born in the U.S.? ____
   If no, state the country where the child's mother and father were born:
   a. Mother was born in _____
   b. Father was born in _____

9. What is the ethnicity of the child's family?
   a. Mexican or Mexican-American
   b. Hispanic/Latino, *from a country that is NOT Mexico*
   c. White, not Hispanic
   d. African American/Black, not Hispanic
   e. Other _____

10. What is the current standard of living for this household?
    a. We don't have enough financial resources to meet our needs
    b. We have just enough to meet our needs, but not much extra
    c. We live comfortably and can afford some non-necessities
    d. We are well off financially

11. If your family moved to the U.S. from another country: How does your current standard of living compare to what it was in your home country?
    a. We are now more comfortable financially
    b. We used to be more comfortable financially
    c. We have about the same standard of living as before

APPENDIX F

PARENT/ GUARDIAN ACCULTURATION QUESTIONNAIRE IN ENGLISH

Please answer the following questions only if they apply to your family:

1. How important is it that your child maintains a connection with your family's ethnic heritage?
    a. Very important
    b. Somewhat important
    c. Not important

2. How important is it that your child learns to read and write in the family's native language? (if the language is other than English)
    a. Very important
    b. Somewhat important
    c. Not important

3. How often does your child participate in practices common to your family's ethnic heritage? (Includes eating foods common to your family culture, talking about the home country, traditional celebrations, etc.)
    a. Every day
    b. Once per week
    c. Once per month or less often
    Please describe these practices:
    _____

4. How important is it that your child learns the culture and way of life of the U.S.?
    a. Very important
    b. Somewhat important
    c. Not important

5. If your family moved to the U.S. from another country, what was the *primary* motive for moving?

    a. Better job/economic opportunities
    b. Political asylum
    c. Better education for my children
    d. To be near family in the U.S.
    e. Other: _____

6. Have you and your child ever gotten into a discussion over differences between the practices and values of the home culture and the practices and values of the U.S.? _____
    If you answered yes, please describe:
    _____
    _____
    _____